DAFTAR PUSTAKA

[1] K. R. Widiasari, I. M. K. Wijaya, and P. A. Suputra, "Diabetes Melitus Tipe 2: Faktor Risiko, Diagnosis, Dan Tatalaksana," *Ganesha Med.*, vol. 1, no. 2, p. 114, 2021, doi: 10.23887/gm.v1i2.40006.

[2] A. H. Putri and J. Yawahar, "Kajian agro sosiologi dan potensi metabolit sekunder bunga telang (Clitoria ternatea) sebagai peningkat imunitas tubuh," *J. Agrosociology Sustain.*, vol. 1, no. 1, pp. 16–30, 2023, doi: 10.61511/jassu.v1i1.2023.57.

[3] S. D. Handari, M. Rahmasari, and Y. D. Adhela, "Correlation between Diabetes Mellitus Type 2, Cholesterol with Calcium Score in Patient with Hypertension and Obesity," *Amerta Nutr.*, vol. 7, no. 1, pp. 7–13, 2023, doi: 10.20473/amnt.v7i1.2023.7-13.

[4] A. F. Rahmani, S. Mubarok, M. A. Soleh, and B. M. P. Prawiranegara, "Evaluasi Kualitas Nutrisi Microgreen Bayam Merah dan Hijau Menggunakan Cahaya Buatan," *Kultivasi*, vol. 20, no. 3, pp. 168–174, 2021, doi: 10.24198/kultivasi.v20i3.33365.

[5] Y. Zhang, Z. Xiao, E. Ager, L. Kong, and L. Tan, "Nutritional quality and health benefits of microgreens, a crop of modern agriculture," *J. Futur. Foods*, vol. 1, no. 1, pp. 58–66, 2021, doi: 10.1016/j.jfutfo.2021.07.001.

[6] A. Božić and S. Milošević, "Microgreens in Gastronomic Offer of Belgrade Restaurants," *Tour. Rural Dev.*, vol. 5, no. 1, pp. 94–111, 2020.

[7] I. W. Rafiqah and F. D. Rahmayanti, "Mimbar Agribisnis : Trend Pengembangan Microgreen sebagai Sistem Pertanian Urban dan Pemasarannya," vol. 8, no. 2, pp. 700–709, 2022.

[8] D. P. Ariyanto, J. Suyana, and H. Y. R. Wijaya, "Membangun Sinergi antar Perguruan Tinggi dan Industri Pertanian dalam Rangka Implementasi Merdeka Belajar Kampus Merdeka," *Semin. Nas. dalam Rangka Dies Natalis ke-45 UNS Tahun 2021*, vol. 5, no. 1, pp. 563–568, 2021.

[9] N. Rizkiyah and P. Wijayanti, "Microgreens Sebagai Alternatif Budidaya Tanaman Pertanian Urban," *Pros. Semin. Nas. Magister Agribisnis*, pp. 21–27, 2021.

[10] Q. Ying, Y. Kong, and Y. Zheng, "Overnight supplemental blue, rather than far-red, light improves microgreen yield and appearance quality without compromising nutritional quality during winter greenhouse production," *HortScience*, vol. 55, no.

9, pp. 1468–1474, 2020, doi: 10.21273/HORTSCI15196-20.

[11] Y. Resti, R. K. Dewi, and T. F. Rayani, "Suhu, Kelembaban Dan Intensitas Cahaya Pada Penanaman Green Fooder Menggunakan Sistem Smart Hidroponik," *J. Sains Terap.*, vol. 12, no. 2, pp. 77–85, 2022, doi: 10.29244/jstsv.12.2.77-85.

[12] F. Nurfadillah, N. Octavia, Z. Naufal Maulana, R. Cahyadi, D. Marlina, and R. Siskandar, "Optimalisasi Suhu dan Intensitas Cahaya pada Bilik Perkawinan Bsf dengan Sensor DHT-22 dan Ambient Light," vol. 13, no. 2, pp. 1–10, 2023, doi: 10.29244/jstsv.13.2.7-15.

[13] S. Mlinarić *et al.*, "The effect of light on antioxidant properties and metabolic profile of Chia microgreens," *Appl. Sci.*, vol. 10, no. 17, 2020, doi: 10.3390/APP10175731.

[14] E. Putri, "The impact of color of artificial LED lighting on microgreen: a review," *Kultivasi*, vol. 21, no. 2, pp. 223–230, 2022, doi: 10.24198/kultivasi.v21i2.39931.

[15] S. Maseva, P. Utama, A. H. Sodiq, and I. Rohmawati, "Pengaruh Lama Penyinaran Lampu Led (Light Emitting Diode) dan Jenis Media Tanam Terhadap Pertumbuhan Microgreens Bayam Merah," *J. Pertan. Agros*, vol. 26, no. 1, p. 102, 2024, doi: 10.37159/jpa.v26i1.4204.

[16] M. R. M. Kassim, "IoT Applications in Smart Agriculture: Issues and Challenges," *2020 IEEE Conf. Open Syst. ICOS 2020*, pp. 19–24, 2020, doi: 10.1109/ICOS50156.2020.9293672.

[17] R. A. Murdiantoro, I. A. Nur, A. F. Isnawati, and M. A. Afandi, "Adoption of Artificial Lighting Technology for Microgreen Cultivation as an Effort to Improve Community Economy," vol. 3, no. 2, pp. 61–67, 2024, doi: 10.47841/icorad.v3i2.269.

[18] E. Nugraheni, K. Karno, and S. Sutarno, "Respon Pertumbuhan dan Biokimia Microgreens Tanaman Basil (Ocimum Basilicum L.) Terhadap Kombinasi Warna LED dan Lama Penyinaran yang Berbeda," *J. Agritechno*, vol. 14, no. 02, pp. 88–97, 2021, doi: 10.20956/at.v14i2.492.

[19] C. Najera and M. Urrestarazu, "Effect of the intensity and spectral quality of LED light on yield and nitrate accumulation in vegetables," *HortScience*, vol. 54, no. 10, pp. 1745–1750, 2024, doi: 10.21273/HORTSCI14263-19.

[20] B. Ahmed and L. U. Peng, "Smart Agriculture : Current State , Opportunities , and Challenges," vol. 12, no. August, 2024.

[21] A. A. Alzubi and K. Galyna, “Artificial Intelligence and Internet of Things for Sustainable Farming and Smart Agriculture,” *IEEE Access*, vol. 11, no. June, pp. 78686–78692, 2023, doi: 10.1109/ACCESS.2023.3298215.

[22] A. Vanesaputri, S. Setiyono, and A. P. Arum, “The Effect of Planting Media and Axes on the Growth and Yield of Red Spinach (Amaranthus tricolor L.) in Hydroponic System,” *Agrosains J. Penelit. Agron.*, vol. 24, no. 1, p. 20, 2022, doi: 10.20961/agsjpa.v24i1.58892.

[23] R. Rahmatullah *et al.*, “Design and Implementation of IoT-Based Monitoring Battery and Solar Panel Temperature in Hydroponic System,” *J. IlmiahTeknik Elektro*, vol. 9, no. 3, pp. 810–820, 2023, doi: 10.26555/jiteki.v9i3.26729.

[24] A. P. Lestari, A. Riduan, Elliyanti, and D. Martino, “Pengembangan Sistem Pertanian Hidroponik pada Lahan Sempit Komplek Perumahan,” *Saintifik*, vol. 6, no. 2, pp. 136–142, 2020, doi: 10.31605/saintifik.v6i2.259.

[25] T. M. Prihtanti, N. Widyawati, E. Pudjihartati, and D. Murdono, “Introduksi Microgreen Sebagai Upaya Mendukung Pangan Sehat Keluarga Dan Edukasi Generasi Muda Masyarakat Perkotaan,” *JMM (Jurnal Masy. Mandiri)*, vol. 7, no. 2, p. 1918, 2023, doi: 10.31764/jmm.v7i2.13087.

[26] Z. Febriansyah, H. Fitriyah, R. Regasari, and M. Putri, “Sistem Kendali Suhu dan kelembapan udara pada Tanaman Bayam Microgreen dalam Ruangan Tertutup menggunakan Regresi Linier,” *J. Pengemb. Teknol. Inf. dan Ilmu Komput.*, vol. 7, no. 5, pp. 2542–2547, 2023, [Online]. Available: https://j-ptiik.ub.ac.id/index.php/j-ptiik/article/view/12705

[27] F. Santoni *et al.*, “GreenCube: Microgreens cultivation and growth monitoring on-board a 3U cubesat,” *2020 IEEE Int. Work. Metrol. AeroSpace, Metroaerosp. 2020 - Proc.*, pp. 130–135, 2020, doi: 10.1109/MetroAeroSpace48742.2020.9160063.

[28] D. A. S. Hartanti, Y. Puspaningrum, and A. I. Yuliana, “Improving the skills of the residents of the Abadi Megah Regency Jombang in microgreens cultivation techniques as an effort to improve family food security,” *Community Empowerment*, vol. 7, no. 9. 2022. doi: 10.31603/ce.7824.

[29] Swaraj Agarwal, “Benefits of Microgreens How are Microgreens Effective in Boosting Immunity and Protecting against Cancer,” *Int. J. Trend Sci. Res. Dev.*, vol. 4, no. 6, pp. 156–158, 2020, [Online]. Available: url: https://www.ijtsrd.com/papers/ijtsrd33288.pdf%0Ahttps://www.ijtsrd.com/medicine

/other/33288/benefits-of-microgreens-how-are-microgreens-effective-in-boosting-immunity-and-protecting-against-cancer/swaraj-agarwal

[30] I. W. Rafiqah and F. D. Rahmayanti, "Trend Pengembangan Microgreen Sebagai Sistem Pertanian Urban Dan Pemasarannya," *Mimb. Agribisnis J. Pemikir. Masy. Ilm. Berwawasan Agribisnis*, vol. 8, no. 2, p. 700, 2022, doi: 10.25157/ma.v8i2.7197.

[31] E. Sari, Mekar Zenni Radhia, and Hanifa Zaini S, "The Effect of Red Spinach Juice on Hemoglobin Levels in Pregnant Women: A Randomized Controlled Trial," *Sriwij. J. Obstet. Gynecol.*, vol. 2, no. 2, pp. 92–102, 2024, doi: 10.59345/sjog.v2i2.147.

[32] S. Sudewi *et al.*, "Respon Pertumbuhan Tanaman Selada Merah (Lactuca sativa L. var. Olga Red) terhadap Berbagai Jenis Media Tanam dengan Teknologi Hidroponik Sistem Terapung Tanpa Sirkulasi," *Agrotechnonogy Sci.*, vol. 7, no. January, pp. 27–38, 2022, doi: 10.52434/jagros.v7i1.2121.

[33] N. Dakiyo and N. M. , Hayatiningsih Gubali, "Respon Pertumbuhan dan Hasil Tanaman Selada Merah (Lactuca sativa L.) pada Tingkat Naungan dan Media Tanam yang Berbeda," *J. Agroteknotropika*, vol. 1, no. 11, pp. 24–32, 2022, [Online]. Available: https://repository.unsri.ac.id/88327/

[34] P. Ria, S. Noer, and G. Marhento, "Efektivitas Pemberian Nasi Basi Sebagai Pupuk Organik pada Tanaman Selada Merah (Lactuca sativa var. crispa)," *EduBiologia Biol. Sci. Educ. J.*, vol. 1, no. 1, p. 55, 2021, doi: 10.30998/edubiologia.v1i1.8088.

[35] E. Proklamasiningsih and I. Budisantoso, "Pertumbuhan dan Kandungan Polifenol Selada Merah (Lactuca Sativa L . var . crispa L .) pada Media Tanam dengan Pemberian Asam Humat," vol. 5, pp. 160–167, 2023.

[36] S. Zheng *et al.*, "Is Rockwool Potentially Harmful to the Soil Environment as a Nursery Substrate? Taking Eisenia fetida as an Example for Toxicological Analysis," *Agric.*, vol. 13, no. 10, 2023, doi: 10.3390/agriculture13101964.

[37] M. Qaryouti, M. Osman, A. Alharbi, W. Voogt, and M. E. Abdelaziz, "Using Date Palm Waste as an Alternative for Rockwool: Sweet Pepper Performance under Both Soilless Culture Substrates," *Plants*, vol. 13, no. 1, 2024, doi: 10.3390/plants13010044.

[38] P. Thomas, O. G. G. Knox, J. R. Powell, B. Sindel, and G. Winter, "The Hydroponic Rockwool Root Microbiome: Under Control or Underutilised?," *Microorganisms*,

vol. 11, no. 4, 2023, doi: 10.3390/microorganisms11040835.

[39] D. Istenič *et al.*, "Composting of recovered rock wool from hydroponics for the production of soil amendment," *Environ. Sci. Pollut. Res.*, vol. 31, no. 20, pp. 29280–29293, 2024, doi: 10.1007/s11356-024-33041-2.

[40] S. N. Aini, "Pengaruh Warna Cahaya LED Merah, Biru, Kuning dan Media Tanam Terhadap Pertumbuhan dan Produksi Microgreen Bayam Merah (Amaranthus gangeticus)," *Agronisma*, vol. 4, no. 1, pp. 1–23, 2021.

[41] G. C. Modarelli, R. Paradiso, C. Arena, S. De Pascale, and M. C. Van Labeke, "High Light Intensity from Blue-Red LEDs Enhance Photosynthetic Performance, Plant Growth, and Optical Properties of Red Lettuce in Controlled Environment," *Horticulturae*, vol. 8, no. 2, 2022, doi: 10.3390/horticulturae8020114.

[42] Slameto, "Pengaruh Lama Penyinaran Dan Daya LED Growlight Terhadap Pertumbuhan dan Hasil Tanaman Sawi Hijau (Brassica juncea L.)," *J. Pertan. Agros*, vol. 25, no. 2, pp. 1624–1638, 2023.

[43] H. R. Roosta, M. Bikdeloo, and M. Ghorbanpour, "The growth, nutrient uptake and fruit quality in four strawberry cultivars under different Spectra of LED supplemental light," *BMC Plant Biol.*, vol. 24, no. 1, pp. 1–17, 2024, doi: 10.1186/s12870-024-04880-5.

[44] S. Proietti, R. Paradiso, S. Moscatello, F. Saccardo, and A. Battistelli, "Light Intensity Affects the Assimilation Rate and Carbohydrates Partitioning in Spinach Grown in a Controlled Environment," *Plants*, vol. 12, no. 4, pp. 0–15, 2023, doi: 10.3390/plants12040804.

[45] R. Paradiso and S. Proietti, "Light-Quality Manipulation to Control Plant Growth and Photomorphogenesis in Greenhouse Horticulture: The State of the Art and the Opportunities of Modern LED Systems," *J. Plant Growth Regul.*, vol. 41, no. 2, pp. 742–780, 2022, doi: 10.1007/s00344-021-10337-y.

[46] J. W. Simatupang *et al.*, "Lampu Led Sebagai Pilihan Yang Lebih Efisien Untuk Lampu Utama Sepeda Motor," *J. Kaji. Tek. Elektro*, vol. 6, no. 1, pp. 20–26, 2022, doi: 10.52447/jkte.v6i1.4434.

[47] Y. Dewi Kumala Sari, Sudarti, "Analisis Pengaruh Gelombang Elektromagnetik Cahaya Tampak pada Proses Fotosintesis Tanaman Hydrilia," *J. Multidisiplin Saintek*, vol. 01, no. 10, pp. 11–20, 2023.

[48] S. Suyatman, "Menyelidiki Energi Pada Fotosintesis Tumbuhan," *INKUIRI J.*

Pendidik. IPA, vol. 9, no. 2, p. 134, 2021, doi: 10.20961/inkuiri.v9i2.50085.

[49] S. Ramadani, N. Kristina, A. Syarif, and E. Resigia, "Pengaruh Warna Cahaya Terhadap Morfogenesis Eksplan Kalus Bawang Putih (Allium Sativum L.) Secara In-Vitro," *J. Agroteknologi*, vol. 14, no. 2, p. 63, 2024, doi: 10.24014/ja.v14i2.25211.

[50] N. Kholifah, "Karakterisasi Sistem Sensor LDR Berdasarkan Perbedaan Panjang Gelombang Cahaya," *J. Electron. Instrum.*, vol. 1, no. 2, pp. 78–86, 2024.

[51] N. Indah *et al.*, "Perbandingan Pengaruh Cahaya Tampak Terhadap Laju Fotosintesis Tumbuhan Hydrilla Verticillata," vol. 3, no. 3, pp. 440–447, 2024.

[52] L. Zheng *et al.*, "Explore Luminance Attenuation and Optical Crosstalk of RGB Mini Light-Emitting Diode via Microscopic Hyperspectral Imaging," *IEEE J. Electron Devices Soc.*, vol. 10, no. October, pp. 827–832, 2022, doi: 10.1109/JEDS.2022.3210601.

[53] A. Q. Jailani, S. Suharyanto, and T. Ruchimat, "Innovative Multi-Color LED HPL Lamps for Improved Efficiency in Floating Lift Net Fishing," vol. 3, no. 1, pp. 10–17, 2025, doi: 10.61975/gjset.v3i1.64.

[54] I. S. Journal, "Computer Systems and Information Technologies," pp. 33–41, 2022.

[55] J. Liebenau and J. Backhouse, "Computer systems and information systems," *Underst. Inf.*, no. 2, pp. 80–93, 2020, doi: 10.1007/978-1-349-11948-6_7.

[56] B. Delgado, N. Tan, N. S. C. J. Larsen, L. Kobran, S. Afzal, and M. Marcellin, "Driver Interface Using CAN Communication System Wildcat Formula Racing Electronics," *Proc. Int. Telemetering Conf.*, vol. 57, pp. 233–243, 2022.

[57] N. S. Habeahan and N. Rchmat, "Memperbaiki Rancang Bangun Panel Dinding Simulasi Sistem Hidrolik Roda Pendarat dan Tiap Grand Comander 68 OFL," no. July, p. 13, 2022.

[58] S. R. Perumal and F. Baharum, "Design and Simulation of a Circadian Lighting Control System Using Fuzzy Logic Controller for LED Lighting Technology," *J. Daylighting*, vol. 9, no. 1, pp. 64–82, 2022, doi: 10.15627/jd.2022.5.

[59] I. Y. Basri, D. Novaliendry, and I. M. Tania, "Design and Development of Inductive Sensor Mini Trainer Based on Arduino," *J. Teknol. Inf. dan Pendidik.*, vol. 15, no. 1, pp. 38–49, 2022, doi: 10.24036/jtip.v15i1.561.

[60] R. T. Subagio, K. Kusnadi, and T. Sudiarto, "Prototype Sistem Keamanan Buka Tutup Atap Jemuran Otomatis Menggunakan Sensor Air Dan Light Dependent

Resistor (Ldr) Berbasis Arduino," *J. Digit*, vol. 8, no. 2, pp. 161–172, 2020.

[61] F. Bima Prakarsa and Edidas, "Rancang Bangun Alat Sortir Panen Ikan Lele Berbasis Arduino UNO R3," *J. Pendidik. Tambusai*, vol. 6, no. 1, pp. 1202–1218, 2022.

[62] J. Postel and K. Harrenstien, "A Dynamic Framework for Internet-Based Network," no. 868, p. 2, 2024, [Online]. Available: http://www.rfc-editor.org/rfc/rfc868.txt

[63] K. Lamshöft, J. Hielscher, C. Krätzer, and J. Dittmann, "The Threat of Covert Channels in Network Time Synchronisation Protocols," *J. Cyber Secur. Mobil.*, vol. 11, no. 2, pp. 165–204, 2022, doi: 10.13052/jcsm2245-1439.1123.

[64] A. R. Mahlous, "Quantitative Risk Analysis of Network Time Protocol (NTP) Spoofing Attacks," *IEEE Access*, no. August, pp. 164891–164910, 2024, doi: 10.1109/ACCESS.2024.3493759.

[65] Nur Rachman Supadmana Muda, "Design and Development of A Stealth Unic For Silent Operation With ESP32-Based Autonomous Control," *J. Cakrawala Ilm.*, vol. 15, no. 1, pp. 37–48, 2024.

[66] S. Chattopadhyay, *Microcontrollers and Applications*. 2023.

[67] N. Zaveri, B. E. Student, M. Shukla, B. E. Student, A. Singh, and B. E. Student, "Green Home System for Energy Efficiency and Carbon Footprint Monitoring : A Comprehensive Study".

[68] D. M. T. Siregar, F. Ali, D. Maulida, E. Maulana, N. Wahyu, and W. Anrya, "Light Duration and Light Emitting Diode (LED) on the Growth and Yield of Microgreens in Sunflower (Helianthus annus)," *J. Hortic. Prod. Technol.*, vol. 1, no. 2, pp. 84–94, 2023.